

Title (en)

COMBINED SYSTEM FOR PRODUCING STEEL AND METHOD FOR OPERATING THE COMBINED SYSTEM

Title (de)

ANLAGENVERBUND ZUR STAHLERZEUGUNG UND VERFAHREN ZUM BETREIBEN DES ANLAGENVERBUNDES

Title (fr)

ENSEMBLE D'INSTALLATIONS PERMETTANT LA PRODUCTION D'ACIER ET PROCÉDÉ PERMETTANT DE FAIRE FONCTIONNER L'ENSEMBLE D'INSTALLATIONS

Publication

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Application

EP 14815579 A 20141211

Priority

- DE 102013113958 A 20131212
- EP 2014003316 W 20141211

Abstract (en)

[origin: CA2930451A1] The invention relates combined system for producing steel, comprising a blast furnace (1) for producing pig iron, a converter steel mill (2) for producing crude steel, a gas line system for gases, said system operating when pig iron and crude steel is being produced, and a power plant (3) for generating energy. Said power plant (3) is designed as a gas turbine power plant or gas turbine and steam turbine power plant and is driven by gas which comprises at least one partial amount of the blast furnace sealing gas (7) produced during the generation of crude iron in the blast furnace (1) and/or a partial amount of converter gas (9) produced in the converter steel mill (2). According to the invention, the combined system also comprises a chemical plant (12) and a biotechnological plant (13), said power plant (3), the chemical plant (12) and the biotechnological plant (13) being arranged with respect to the supply of gas in a parallel circuit. Said gas line system comprises a gas distribution device (14) which can be controlled in an operational manner and is used to divide the gas mass flows guided to the power plant (3), the chemical system (12) and the biotechnological system (13). The invention also relates to a method for operating the combined system.

IPC 8 full level

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Citation (opposition)

Opponent : Arcelormittal

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- GHANBARI ET AL.: "Optimal Design and Operation of a Steel Plant Integrated with a Polygeneration System", AICHE JOURNAL, vol. 59, no. 10, October 2013 (2013-10-01), XP055501257, DOI: 10.1002/aic.14098

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US10697031B2; WO2015086150A1

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